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A NEW *OXYETHIRA* (HYDROPTILIDAE, TRICHOPTERA) OF THE *AEOLA* ROSS GROUP; WITH A KEY TO SEPARATE THE FIVE MALES OF THE GROUP[1]

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Oxyethira allosi, new species

Holotype, male.—3.3 mm long, specimens from the type series vary from 3.0 to 3.5 in length. Genitalia, Fig. 1A, B. Seventh sternal process short, thin, pointed. Eighth tergite deeply and widely incised, sides of the incision regular. Ninth tergite, the projecting rods apparent in the other species of the group are lacking; subgenital plate arcuate, deeply pigmented, emarginate apically, the apico-lateral corners rounded. Claspers below subgenital plate round, pigmented; a short cylindrical process arises near the clasper base, process tipped with a seta. Aedeagus, Fig. 1ae, long tubular the tip membranous, expanded; a curved structure extends into the membranous part; aedeagal length 0.5 mm.

Holotype, male.—Oroville, Butte Co., California, I-24-1975 T. D. Eichlin and T. Kono collectors. The holotype was taken on concrete fish ladders at fish hatchery. Paratypes, 18 males, same data as above. One male, Sunol Regional Park, Alameda Co., California, X-15-1974, D. G. Denning collector. 14 males, Mendocino Co., California, VI-24-1978, D. G. Denning collector, creek at Brook Trail near Willits. Four males, Nimrod Warm Springs, Route I-90, Granite Co., Montana, V-10-1970, D. S. Potter collector. One male, Goshen, Utah Co., Utah, I-27-1973, R. N. Winget collector.

The paratype from Utah was taken at springs and ponds 1.5 km east of Goshen from a slow running stream (about 10 m in length) connecting two small ponds each less than half a hectare in extent. These ponds are fed by warm water springs and are characterized by heavy growths of submerged and floating vegetation. The connecting stream has a sand-gravel-silt substrate with significant amounts of water cress and Chara and other algae.

Allotype, female.—Fig. 1F, same size and color as male. Two sclerotized plates exterior to the cerci, two small setae between cerci. Ninth sternite rounded, covered with setae on anterior part. Bursa copulatrix with three "chambers." Fig. 1bc. There appears to be an inverted Y structure at the base.

Allotype, female.—Mendocino Co., California, creek at Brook Trail near Willits, VI-24-1978, D. G. Denning collector.

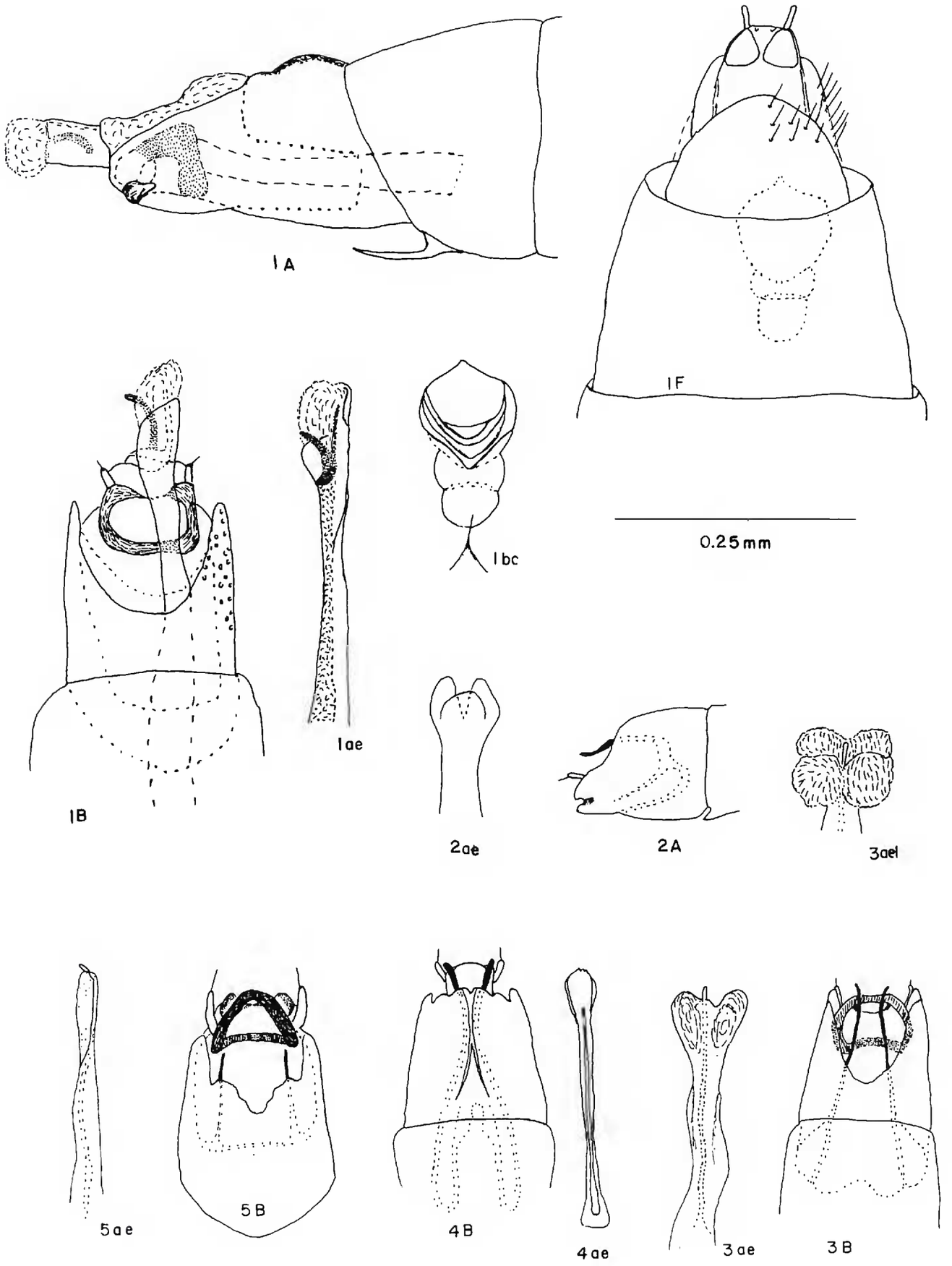

Fig. 1. *Oxyethira allosi* n.sp. Genitalia; A, male, lateral; B, male dorsal; ae, aedeagus, dorsal; F, female, ventral; bc, bursa copulatrix. Line = 0.25 mm. Fig. 2. *Oxyethira abacatia* Denning; A, male, lateral; ae, aedeagus. Fig. 3. *Oxyethira anabola* Blickle; B, male, dorsal; ae, aedeagus; ael, apex of aedeagus lobes expanded. Fig. 4. *Oxyethira barnstoni* Harper; B,

The two plates and the two small setae near the cerci plus the three chambered bursa sets this apart from related species.

Deposition of type material.—Holotype male, allotype female and 13 male paratypes to the California Academy of Science, San Francisco, California. Two male paratypes to California State Department of Agriculture, Insect Taxonomy Laboratory, Sacramento, California. Remaining paratype males to Dr. D. G. Denning, Moraga, California.

This species belongs to a group of hydroptilids characterized by the males having an arcuate subgenital plate, a large tubular aedeagus having no spiral process, and (usually) rods projecting posteriorly from the 9th tergite.

This species differs from *abacatia* Denning (1947) and *anabola* Blickle (1966) by a lack of aedeagal lobes, from *barnstoni* Harper (1976) by having the incision of the 8th tergite deep and from *aeola* Ross (1938) by having the sides of the 8th tergal incision regular, in addition *allosi* n. sp. lacks rods projecting posteriorly from the 9th tergite as possessed by the others of the group. The subgenital plate posteriorly is also more irregular than those of the other species.

The known geographic distribution of the five described species of the *aeola* group is: *Oxyethira abacatia* Denning, Florida, Georgia; *O. aeola* Ross, British Columbia to Minnesota: *O. anabola* Blickle, New Jersey to Quebec to Minnesota; *O. barnstoni* Harper, Quebec; *O. allosi* n. sp., California, Montana, Utah.

Key to Males of *aeola* Ross Group

1. Apex of aedeagus 3 or more lobes (Figs. 2, 3) 2
   Apex of aedeagus simple or expanded membranous mass 3
2. Apex of aedeagus 3 lobed; rods of 9th segment do not extend beyond subgenital plate (Fig. 2) ..... *abacatia* Denning
   Apex of aedeagus 4 lobed; rods of 9th segment extend beyond subgenital plate (Fig. 3) ..... *anabola* Blickle
3. Incision of 8th tergite narrow (Fig. 4) ..... *barnstoni* Harper
   Incision of 8th tergite broad, deep 4
4. Sides of 8th tergite incision irregular (Fig. 5) ..... *aeola* Ross
   Sides of 8th tergite incision regular (Fig. 1) ..... *allosi* n.sp.

The key above replaces the couplets 18 to 19, pages 39–40 of the Oxy-

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male, dorsal; ae, aedeagus. Fig. 5. *Oxyethira aeola* Ross; B, male, dorsal; ae, aedeagus. Fig. 2, redrawn from Denning (1947); Fig. 3, redrawn from Blickle (1966); Fig. 4, redrawn from Harper (1976); Fig. 5, redrawn from Ross (1938).

ethira key in the Hydroptilidae (Trichoptera) of America North of Mexico, Blickle (1979).

Literature Cited

Blickle, R. L. 1966. A new Hydroptilidae (Trichoptera). Entomol. News, 67:185–187.

Blickle, R. L. 1979. Hydroptilidae (Trichoptera) of America North of Mexico. New Hamp. Agr. Exp. Sta. Bull. 509, 98 pp.

Denning, D. G. 1947. Hydroptilidae from Southern United States. Can. Entomol., 79:12–20.

Harper, P. P. 1976. *Oxyethira barnstoni* n.sp. un noveau trichoptere de Radisonie Quebec (Hydroptilidae). Ann. Entomol. Soc. Quebec, 21:35–38.

Ross, H. H. 1938. Descriptions of Nearctic Caddisflies with special reference to Illinois species. Ill. Natr. Hist. Surv. Bull., 21:101–183.

Footnote

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